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THE INCIDENCE OF PROCEDURAL DIFFICULTY IN TRANSRADIAL CORONARY ANGIOGRAPHY

i2 Poster Contributions

Ernest N. Morial Convention Center, Hall F
Monday, April 04, 2011, 9:30 a.m.-10:45 a.m.

Session Title: CTA/MRI, Imaging in the Cath Lab, Angiography

Abstract Category: 2. Imaging in the Cath Lab; Angiography & QCA

Session-Poster Board Number: 2510-541

Authors: *Yumiko Kanei, Karthik Gujja, Kengo Ayabe, Navin Nakra, Yili Huang, Michael Liou, Tak Kwan, John Fox, Beth Israel Medical Center, New York, NY*

Background: Transradial coronary angiography (TCA) is an attractive alternative to the femoral approach because of its lower incidence of complications. The objective of this study is to describe the incidence and predictors of procedural difficulty in TCA in our diverse population.

Methods: 764 consecutive patients who underwent diagnostic TCA with or without coronary intervention via the right radial artery were included. The primary end-point was procedural difficulty defined as the need for : 1) hydrophilic wire due to tortuosity, 2)stiff wire for coronary artery engagement, 3)multiple catheters (> 3 catheters) to engage one coronary ostium, 4) non-selective injection, and 5) subclavian angiography.

Results: Procedural success was achieved in 98%, and procedural difficulty was seen in 120/764 (16%) patients. The use of a hydrophilic wire was the most common reason for the procedural difficulty, and was seen in 72 patients. Procedural difficulty was associated with increased fluoroscopy time and contrast use. Predictors of procedural difficulty were advanced age, female gender, Hispanic ethnicity, a history of hypertension, and increasing weight.

Conclusions: Advanced age, female gender, Hispanic origin, increased weight, and hypertension may be predictors for procedural difficulty in patients who are undergoing transradial coronary angiography. Overall procedural success was high.

| Patient characteristics | | | |
|-------------------------|-------------------------------|----------------------------------|---------|
| | Procedural difficulty (n=120) | No procedural difficulty (n=644) | P |
| Age | 69 ± 11 | 64 ± 12 | <0.0001 |
| Men | 43 (36%) | 343 (53%) | 0.0007 |
| Asian | 27 (17%) | 130 (83%) | 0.0029 |
| Black | 52(13%) | 363 (87%) | |
| Hispanic | 31 (26%) | 86 (74%) | |
| White | 10 (13%) | 65 (87%) | |
| Weight (Kg) | 81 ± 26 | 77 ± 23 | 0.0872 |
| Body mass index | 30 ± 9 | 29 ± 8 | 0.2184 |
| Hypertension | 102 (85%) | 498 (77%) | 0.0788 |